

#### ALFA INTERNATIONAL CORPORATION

#### www.alfaadhesives.com

# AL420FDA

# **Two-Part Epoxy Resin**

**TECHNICAL PRODUCT BULLETIN** 

### **GENERAL DESCRIPTION**

AL420FDA is a two-part, heat-resistant and low exothermic epoxy adhesive formulation. It is a 100% solid epoxy adhesive, with superior chemical resistance and shear strength.

AL420FDA contains a thixotropic agent, which impedes thinning out of the material during heat cure when properly mixed and cured.

### ADVANTAGES

- Develops a strong bond
- Durable to numerous construction materials such as metals, glass, rubber, ceramics, concrete and phenolic plastics
- Provides premium resistance to water, salt solutions, galvanic action, acids, alkalies and most chemicals

## **FDAA INFORMATION**

Title 21 of the Code of Federal Regulations (CFR) permits and regulates the use of epoxy resins such as AL420FDA - Part A as an indirect food additive in food contact applications. Some of the sections of 21 CFR that support the above are 175.105, 175.300, 175.320, and 176.17.

AL420FDA - Part B complies with FDAA regulations listed in the Title 21 of the CFR, Sections:

• 175.105 (c)(5) Adhesives

specified in those regulations.

- 175.300 (b)(3)(viii)(c) Coatings adjunct for epoxy resins
- 176.170 (b)(1) Components of paper and paperboard in contact with aqueous and fatty foods.
- 175.300 (b)(xxxii) Side seam cements AL420FDA - Part B will comply with the above regulations as long as it is used only with other approved materials, and as long as the finished product conforms with extractives limitations for the use-situation as

## **SPECIFICATIONS**

Base	Epoxy
Solvent	None
<u>Flammability</u>	Non-Flammable
Color Av	vailable in a variety of Colors
Solids Contents	100%
Coverage	250-350 ft <sup>2</sup> /gal
Shelf life 2 years,	closed packaging, unopened
Service Temperature	-40°C to 165°C
Hardness SD	80
Tensile Shear Strength A	Al to Al 2800 psi

Passes 10 day humidity test mil STD 8:0 above 95% with condensation

Curing times for various temperatures are as follows:

20 min.	@ 177°C
30 min.	@ 121°C
80 min.	@ 93°C
4-6 hours	@ 66°C
16-24 hours	@ 25°C

This superior adhesive develops most of its major mechanical and structural properties after 18 hours at room temperature (overnight at  $25^{\circ}$ C).

### WORKING TIME

AL420FDA's pot life and exotherm are dependent upon several factors: mass of resin, amount of catalyst used, ambient temperature and type of equipment used, among others. A 200 grams mix will have a pot life of approximately 120 minutes at room temperature.

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The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purposes under their own operation conditions. No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention governed by any patent, without the authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the Chemical Manufacturers Association's Responsible Care® program.



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## APPLICATION

- 1. Clean and throughly dry all surfaces to be bonded
- 2. Follow mixing-dispensing instructions as shown on package
- **3.** Apply a thin coat of the mix (not more than 0.010 inches) by brush, spray, or roller to the surfaces to be bonded
- 4. Genlty press surfaces firmly together

## PACKAGING INFORMATION

AL420FDA is available in 50 grams divided plastic bags and in large unit (two-container) pint, quart, and gallon kits. Each kit consists of the correct amount of the specified epoxy material and curing agent hardener formulations, each supplied in separate containers with complete proportioning, use and cure instructions.

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